

Project 1

Submission: Before November 11, 2018 @ 11:55PM

Presentation: Before November 16, 2018 @ 8:30PM

Instruction

In this project, you will work on an AI for [Othello](#) (or Reversi) game. You will divide a group into teams of 2-3 members and form a division to compete. Each team will implement:

1. An evaluation function
2. Depth-limited Minimax with Alpha-Beta pruning

Within a division, you can collaborate on the coding, but do not copy each other code. Especially, all teams should have a distinct evaluation function. Consulting an internet is okay, but you need to cite your source.

You will organize an Othello league within your division and select one best team to compete within your section. Once you complete the submission (next page), book a time with me to present your work.

In the end, we will run a tournament for each section.

Match Rules

...upcoming...

Submission

1. A result of the competition including the match table and a winner of the division. For example,

Winner: Jupiter

Black	White	Result
Jupiter	Earth	14-50
Earth	Jupiter	45-19
...
...

2. A video for each match.
3. A player code for each team. Members should prepare to answer a few questions about the code during the presentation.
4. A representative player code. Everyone in the division can contribute to this code (preferably a modified version of the division winner).

Scoring

This project has the total score of 15% of the class. Your project will be graded based on the following criteria:

1. [5 points] Your understanding of the code during the presentation i.e. formulation, search strategy, and evaluation function.
2. [8 points] The correctness of your implementation:
 - a. [2 points] Video evidence showing that your code works
 - b. [2 points] Alpha-Beta search
 - c. [2 points] Evaluation function
 - d. [2 points] Alpha-Beta search with action ordering and depth limit
3. [2 points] Result of the competition
 - a. [1 point] for everyone in a winning team of a division
 - b. [1 point] for everyone in a division that wins the tournament